



## DEPARTMENT OF THE INTERIOR

### INFORMATION SERVICE

UNITED STATES FISH AND WILDLIFE SERVICE

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#### BIOLOGISTS SEEK ANSWERS TO MANY FISHERY QUESTIONS

Even with the experience gained over unnumbered centuries in the age-old enterprise of fishing, man's best efforts to supply this nutritious protein food for modern markets are still based largely upon hope and guesswork and that's not an efficient or economical way to operate a business, Arnie J. Suomela, Department of the Interior Commissioner of Fish and Wildlife said today.

To remedy the situation, research biologists of the United States Fish and Wildlife Service are seeking ways to take the guesswork out of fishing so that precious time and money are not lost seekin "the fish that isn't there."

Painstakingly--and that's the way research operates--the fishery biologists are seeking the secrets of the sea which bear upon where fish can be found, what makes them abundant and how they can be most efficiently harvested. More than 200 species of fish which are currently used for human food are involved in these studies which stretch from inland streams to mid-ocean.

From the layman's point of view, the Commissioner of Fish and Wildlife explains, the problem can be considered in two parts--

Developing methods by which you can predict when and where you can find large numbers of the fish you want to harvest by understanding what is responsible for variations in the supply.

Knowing the exact effects of various kinds of harvest.

The former will make it possible for the commercial fisherman to know exactly where to go to conduct the finny harvest and the latter the right way to conduct that harvest to maintain bountiful supplies. That will cut down his overhead, put more money in his pocket and at the same time permit savings in the housewife's budget.

Many interesting things are involved in these studies, such as--

The ocean currents, water temperatures, chemical content of the water, etc., and their effect on food supplies for and the distribution of its various fish populations.

What influences favorable spawning conditions and causes good survival years; what stimulates growth rates; the causes for abundance of food; how the effects of disease and predation (natural enemies) are reduced.

How do heredity and the particular water in which the fishes live affect their growth.

Why and how to manage differently the species which live a long time and those which grow rapidly and have a short life span.

Answers to these questions must be found to take the guesswork out of fishing. So the fishery biologist has a long road ahead of him. New answers bring new questions--new days bring new problems, but the goal--that of determining the proper management measures, stream improvement, fish passage devices, pollution abatement, and other things which will lead to continuing high annual fish production--gets closer as each new bit of scientific data is added to what is already known.

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